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## Economic Integration and Incipient Democracy

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# Economic Integration and Incipient Democracy

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Comments most welcome

**ABSTRACT:** Contrary to the common approach in the literature, the economic and other forces that push countries toward democratization are continuous rather than discrete. This paper argues that failure to account for the latent variable of ‘incipient democracy’ can bias estimates of democracy’s determinants. The paper presents a new avenue by which economic integration can foster democracy, one that focuses on the means for democratization rather than the motive. This strengthening of civil society is identified as a necessary component of economic integration with modern distributed production, though we would not expect to see it in autocracies dependent on natural resource trade. The arguments are applied to the case of China.

Philip I. Levy is a resident scholar at the American Enterprise Institute, [philip.levy@aei.org](mailto:philip.levy@aei.org). I would like to acknowledge generous support from the Smith-Richardson Foundation. The paper also benefited from participant comments at the George Mason Center for the Study of Public Choice seminar. I am grateful to Cindy Soo for her excellent research assistance.

## **I. Introduction**

The question of how and when countries democratize has been a vital one for both academics and policymakers. Different academic disciplines have taken their own distinctive approaches, but a leading one in economics and political science has been to compare countries at different stages of democratization and search for the factors that correlate with progress. This type of approach rests on the assumption that progress toward democratization is readily observable and comparable across countries.

This paper focuses on the earliest stages of a move to democracy and argues that progress may not be observable. Instead, progress toward democracy operates as a latent variable. This approach can serve to organize thinking about democratic progress, highlight the effects of economic integration on democratic development. These benefits of integration are distinct from the hypotheses prevalent in the literature, since they focus more on the means by which pressures for change are translated into actual change, rather than just the existence of the pressures themselves.

If incipient democracy builds as an unobserved, continuous, latent variable, this casts doubt on the econometric validity of the pervasive cross-country regressions that have been used to identify causal forces in democratization. By failing to account for the continuous nature of the underlying variable, conventional regression estimators are biased. This paper thus adds to the growing list of econometric critiques of the cross-sectional regression approach to explaining democracy.

The policy questions about integration and democratization are most stark in the case of the People's Republic of China, which is used as an illustrative case in this paper. Since 1978, China has opened to the rest of the world. That opening has accelerated in the last decade as China has taken a leading role in an integrated global production process. Yet according to the dominant measures of political progress, China has advanced little – if at all – in recent decades.

The argument here is not that China is, in fact, more free than we perceive, but rather that the potential for democratic progress is substantially greater now than it was before China's opening to the world. Historically, progress toward democracy has been a very gradual process. Centuries passed between the signing of the Magna Carta in

England in 1215 and fairly broad extension of suffrage in the 1830s.<sup>1</sup> Given this very slow rate of change, using the common discrete indicators of democratic change over a period of mere decades may be equivalent to measuring a snail's progress with an odometer.

The enhanced potential for democratic progress comes from an increase in the means for achieving democratic change. These changes are necessary accompaniments of increased economic integration. Whereas the bulk of the literature discusses the motives for maintaining or adopting a political system, such as economic inequality, the focus here is on how such a change might come about. Given the requirements of modern broad-based international commerce, successful economic engagement requires a country to broaden the ability of its citizens to communicate, allow the development of a potential leadership class, and expand the rule of law.

These changes are not forced upon an autocratic government. The government retains the option to forsake economic engagement and all the wealth and legitimacy benefits that accompany it. The essential point is the “dual-use” nature of the elements of modern commerce; the tools that are required for commerce cannot be prevented from also strengthening civil society and thus the potential for democratic change.

One implication of this focus on the shared mechanisms for economic integration and democratic change is an explanation for the “resource curse,” the challenge countries with abundant natural resources have had in adopting and maintaining good governance. The tools of commerce described above are not as integral to a country in which trade is concentrated in a single extractive industry. This argues for distinguishing between types of trade when drawing empirical links between trade and democracy.

The paper proceeds as follows: Section 2 touches on certain aspects of the vast literature on the determinants of democracy. Section 3 discusses the idea of incipient democracy and the econometric problems with ignoring latent variables. Section 4 considers the effects of economic integration with an application to China. Section 5 concludes.

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<sup>1</sup> Both Dam (2006) and Acemoglu and Robinson (2006) provide survey descriptions of the development of law and democracy in England.

## II. Literature Review

There is an immense literature that offers explanations of how democracy is adopted and maintained. This section will attempt to mention only a few points that are relevant for the ensuing discussion.<sup>2</sup>

A first question for the literature is what is meant by the term “democracy.” Przeworski et. al. (2000) focus on a dichotomous characterization – democracies are those states that have contested elections. By this they mean that opposition groups not only can win elections, but they do. Further, the elections have to meaningfully determine governance by covering the true positions of power. Acemoglu and Robinson (2006) also adopt a dichotomous approach, but emphasize the breadth of representation:

“Stated simply and extremely, nondemocracy is generally a regime for the elite and the privileged; comparatively, democracy is a regime more beneficial to the majority of the populace, resulting in policies relatively more favorable to the majority.” p. 18.

For empirical work, definitions of democracy tend to be functions of one of the two dominant data sets that describe the countries of the world in terms of political progress. The Freedom House survey ranks countries on two dimensions, political rights and civil liberties. The political rights rankings are determined by sub-questions in the categories of Electoral Process, Political Pluralism and Participation, and Functioning of Government. Civil liberties questions are grouped into Freedom of Expression and Belief, Associational and Organizational Rights, Rule of Law, and Personal Autonomy and Individual Rights. Those countries that are most free receive a 1 in each category; those that are least free receive a 7. (Freedom House, 2007).

The Polity IV data set provides Democracy and Autocracy measures on a 0-10 scale. The democracy measure asks whether citizens can express effective preferences, whether executive power is constrained, and whether citizens are guaranteed civil liberties. The autocracy coding relies on the openness of executive recruitment,

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<sup>2</sup> For more thorough discussions of the literature, see Shin (1994), Przeworski, Alvarez, Cheibub and Limongi (2000), and Acemoglu and Robinson (2006).

constraints on executive authority, and the nature of the leadership selection process among the ruling elite. (Polity, 2006).

Once democracy is defined, there is the question of how it comes about. In the seminal paper of Lipset (1959) he argued that democracy would emerge after a sufficient level of income was achieved. This is the basis of the “modernization hypothesis.” Lipset argued this on the basis of both cross-country correlations (wealthier countries had more democracy) and on the principle that a sufficient level of income (and education) in the population were necessary “to develop longer time perspectives and more complex and gradualist views of politics.” (p. 83). An extensive literature has pursued the modernization hypothesis and it received support in prominent studies such as that of Barro (1999).

Shin (1994) surveys a different approach in which the strategic interaction of domestic forces is emphasized. He writes:

“There are four stages of democratization: (1) decay of authoritarian rule, (2) transition, (3) consolidation, and (4) the maturing of democratic political order. The second and third have received the most attention from the scholarly community.” p. 143.

Unlike much of the literature, the present paper is most concerned with the first stage, the decay of authoritarian rule. The means by which this occurs does not seem to have influenced the formal empirical literature to any great extent. The literature focuses instead on the forces that may push for change, however that might come about.

There are a number of ways in which international trade can factor into democratization, according to the existing literature. First, it can increase wealth and thus affect democratization through the modernization hypothesis. Second, it can alter the relative distribution of income within an economy. This element is crucial to the analysis of Acemoglu and Robinson (2006), for whom democracy serves as a credible commitment to redistribution from wealthier elites to a poorer majority. In that analysis, key determinants of democratization include the costs of repression and the likely economic impact of political liberalization (which depends on economic inequality).

In studies of democratization and governance, countries with abundant natural resources tend to stand out. Their relatively poor performance has been described as the

“resource curse.” Ross (2001) finds strong evidence that oil endowments impede democracy.<sup>3</sup> Collier (2007, p. 42) looks beyond the adoption of democratic systems to their operation and argues that “The heart of the resource curse is that resource rents make democracy malfunction.”

For the most part, these various explanations and forces are assessed in the literature through the use of cross-sectional regressions. Lipset issued a call for such an approach almost half a century ago:

“Thus, in dealing with democracy, one must be able to point to a set of conditions that have actually existed in a number of countries, and say: democracy has emerged out of these conditions, and has become stabilized because of certain supporting institutions and values, as well as because of its own internal self-maintaining processes. The conditions listed must be ones which differentiate most democratic states from most others.” p. 69.

As reasonable as this seems, the methods have been subject to some recent critiques. Noland (2007) argues that the literature has often failed to construct nested models for estimation. Thus, variables that emerge as significant in one estimation are omitted from other estimations. He demonstrates that nesting models can undo some of the findings of significance in the literature.

Acemoglu, Johnson, Robinson and Yared (2007) argue that the empirical support for the modernization hypothesis is flawed. They highlight the difficulty with Lipset’s approach. There are many variables that vary across countries. To isolate the effects of a variable like income within a country, one would like to use longitudinal data to see how the change in income correlates with the change in democracy. They find that when country fixed effects are applied to pooled data, the evidence for the modernization hypothesis disappears. They interpret this as support for a “critical junctures” hypothesis – that key country-specific historical events set the countries on their paths.

In sum, the literature has generally approached democracy as a discrete (if not binary) variable, focused more on the broad forces that create incentives for

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<sup>3</sup> Noland (2007) argues that this effect is not robust to the inclusion of other explanatory variables, such as Arab ethnicity, into the analysis.



democratization than on the means by which autocracies subside, and looked for the determinants of change in cross-country regressions.

### III. Incipient democracy as a latent variable

For the purposes of this section, we can abstract away from the various definitions of when a polity crosses a line from an autocracy to a democracy. Nor does it matter whether we allow for positive degrees of democracy. We are concerned with the transition from absence of legitimate representation to the lowest stage at which one can argue that a sufficiently large share of the populace is allowed sufficient voice in sufficiently important decisions to consider the country a democracy.

For any country  $c$  at time  $t$ , let us describe an indicator variable

$$1) D_{ct} = \begin{cases} 1 & \text{if democracy} \\ 0 & \text{if autocracy} \end{cases}$$

If we were to spell out the *direct* determinants of  $D_{ct}$  they would include the types of characteristics of democracy described above, such as the character and quality of elections. For analyses dealing with democratization (or regression to autocracy), even these variables are endogenous. Acemoglu and Robinson (2006), for example, describe situations in which autocratic rulers will hold legitimate elections as a means of making a credible commitment to reform to stave off looming pressure from poorer groups within the country. Key determinants of democratization include “costs of repression” and “inequality.”<sup>4</sup> These characteristics of a country could then be considered as *indirect* determinants of  $D_{ct}$ . Without loss of generality, let us describe a vector of the  $N$  relevant indirect determinants as

$$2) X_t = (x_{1t}, x_{2t}, \dots, x_{Nt})$$

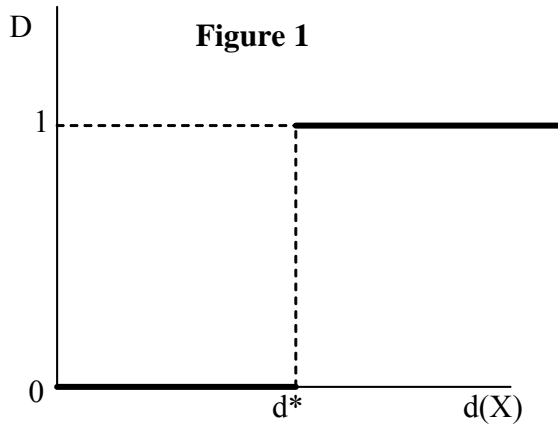
where, for convenience, we suppress the country subscript.

A number of the models describing democratization are deterministic (e.g. Acemoglu and Robinson’s basic setting). In such cases, when one has the right set of explanatory variables  $X_t$ , one *will* have democratization. We will consider the deterministic case and postpone a probabilistic reinterpretation for the moment.

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<sup>4</sup> See Acemoglu and Robinson (2006, p. 44) for one example of this along with a graphic depiction.

Suppose one asks what the change in a variable  $x_i$  (e.g. inequality) does for the prospect of democratization. There are two possibilities. Either this particular  $\Delta x_i$  is sufficient to convert  $D_{ct}$  from 0 to 1, or it is not. In all likelihood (and certainly even the basic cases of Acemoglu and Robinson), the effect of  $\Delta x_i$  on  $D_{ct}$  will depend on the values of other variables in  $X_t$ . Whatever those relationships, there will be cases in which  $\Delta x_i$  is insufficient to convert  $D_{ct}$ . Consider such cases. Do we then conclude that  $x_i$  had no effect on democratization? Our democracy indicator variable would not have changed, so there would be no evidence of any such effect. Yet it could easily be the case that the change in  $x_i$ , if repeated a finite number of times, would lead to democratization. Thus,



$\Delta x_i$  *would*, in fact, represent progress toward democracy. But the progress would go unmeasured with the binary  $D_{ct}$ . For this reason, let us consider a new function

$$3) d_{ct} = f(X_t)$$

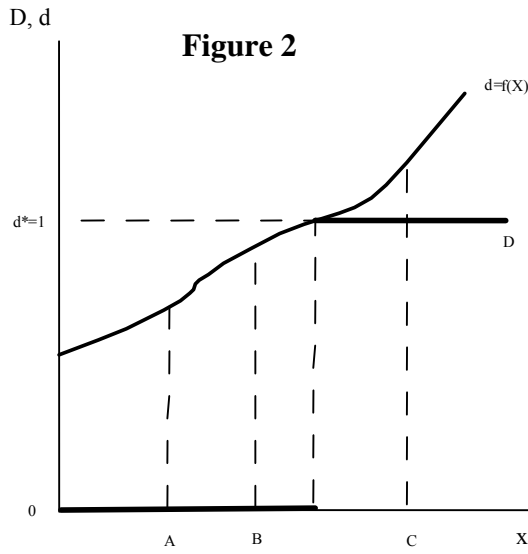
where  $f$  is a well-behaved, continuous and differentiable function of the vector  $X_t$ . Let  $d_{ct}$  represent

underlying progress toward democracy. We can define a critical level,  $d^*$  such that

$$4) D_{ct} = \begin{cases} 1 & \text{if } d_{ct} \geq d^* \\ 0 & \text{if } d_{ct} < d^* \end{cases}$$

Graphically, the relationship is depicted in Figure 1. For changes in the unobserved, underlying variable  $d_{ct}$  below  $d^*$ , there is no change in the value of  $D_{ct}$ .

We return to the possibility of a  $\Delta x_i > 0$  in Figure 2. Without loss of generality, we normalize  $d$  so that  $d^*=1$ . We assume that the variable  $x_i$  contributes positively toward democratization (at least for the given levels of the other relevant components of  $X_t$ ), so  $\frac{\partial d_{ct}}{\partial x_i} > 0$ . Consider first as  $x_i$  increases from A to B. As depicted, this leaves  $d < d^*$  and  $D=0$ . Next, as  $x_i$  increases from B to C,  $d$  increases above  $d^*$  and  $D$  goes from 0 to 1. The country moves from autocracy to democracy.



If  $d$  were observable, we would have no difficulty with either casual or more thorough empirical inference. In this simple example, we would observe a positive correlation between the variable  $x_i$  and democratization. That would be true whether or not  $C$  was sufficiently high to convert  $D$  to 1.

In actuality,  $d$  is an unobserved latent variable. It is the driving force behind  $D$ , but not directly measurable.<sup>5</sup> Since we

observe  $D$  and  $X$  there is a temptation to simply regress the democracy observations on the explanatory variables as a proxy for the regression we would like to run of  $d$  on  $X$ . There are a number of problems with doing so, however.

This falls into the category of a censored variable, in which we see the independent variables but not the value of the dependent variables. If we stick with the assumption that we only observe  $D$ , then the democracy variable is doubly censored. We know whether it is above or below the threshold value of  $d^*$ , but we never observe its value. An alternative assumption is that we observe  $d$  only when  $d \geq d^*$ . This would be consistent with the greater abundance of measures of the strength of democracy (as opposed to measures of the weakening of autocracy).

In either case, least squares regression estimates will be biased. This is generally true in the case of dependent variables that take on discrete values, since the error terms cannot be distributed according to classical assumptions. It is even easier to see in the case of a censored variable regression, in which the dependent variable is

$$5) \ y = \begin{cases} d & \text{if } d \geq d^* \\ 0 & \text{if } d < d^* \end{cases}$$

This  $y$  is regressed on the vector of variables in  $X$ . The standard estimating equation is

<sup>5</sup> There are, of course, political measures available that measure progress short of complete democratization. A central argument of this paper is that the set of such measures and the importance attached to them need to be expanded.

$$6) y = \alpha + \beta X + \varepsilon$$

For  $\beta_{OLS}$  to be an unbiased estimate of  $\beta$ , the error term  $\varepsilon$  must be uncorrelated with the independent variables. For  $d < d^*$ , however, the error includes the difference between the latent and observed values of the democracy variable  $d$ , which is certainly correlated with the components of  $X$ . Thus,  $\beta_{OLS}$  will be biased.<sup>6</sup>

This problem does not seem to have been addressed by some prominent works in the literature. Barro (1999), for example, uses a panel of linear regressions across countries and time to find that the “propensity for democracy” depends positively on income and education, and negatively on urbanization and natural resource reliance. His dependent variable is the Freedom House measure, which takes on values from 1 to 7.<sup>7</sup> The concern about limited dependent variables is not limited to binary variables, however, since the size of the error will still be correlated with the independent variables.

There are a number of standard fixes to limited dependent variable problems in the econometric literature, but they do not serve as panaceas in the case of democratization. With censored variables, the Tobit approach makes use of the observed values of the dependent variable when available and relies on the properties of the error term distribution to allow unbiased inference. An alternative approach, the probit, discards the information in the observed dependent variable and provides estimates of how the independent variables contribute to the probability of observing a 1 rather than a 0. The probit results are therefore somewhat difficult to reconcile with deterministic models and do not attempt to describe the underlying function  $d$ .<sup>8</sup>

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<sup>6</sup> An alternative interpretation is that the bias introduced by the censoring functions like an omitted variable (see Kennedy, 1996, p. 238). See also Acemoglu, Johnson, Robinson and Yared (2007) for an argument that omitted variable biases have driven results in favor of the ‘modernization hypothesis,’ positing a positive relationship between per capital income and democracy.

<sup>7</sup> Barro then scales the variable so that it ranges between 0 and 1. Since this scaling does not affect the discrete nature of the variable, it is irrelevant for the econometric argument above.

<sup>8</sup> Another approach is the linear probability model, which acknowledges the binary nature of the independent variable but converts any predicted negative values to 0 and values above 1 to 1. The more frequent these ‘certainty’ findings are, the less appealing the approach. See Kennedy (1996, p. 229).

The difficulty with each of these limited dependent variable approaches is their reliance on the distribution of the error term. With uncorrected heteroskedasticity, these estimators are not even consistent (i.e., even with large samples there is an asymptotic bias).<sup>9</sup> Given that most empirical estimates of the determinants of democracy use cross-country regressions and the difficulty of accurately assessing democratic progress can vary across countries of different sizes and backgrounds, heteroskedasticity seems highly likely. Consistent maximum likelihood estimation is possible with a properly modeled and estimated error term. This repair leaves the dual concern that additional possibilities for misspecification are introduced with the modeling of the error term and the fact that large sample properties such as consistency may not say a great deal about the smaller number of observations that are more common in democratization studies. To illustrate sample sizes in this literature, we consider the work of Acemoglu, Johnson, Robinson and Yared (2007). They run a number of different regressions using a maximum of 123 countries. The maximum number of observations in one of their estimations is 3,720. This large number comes from a panel of 119 countries and decades of annual data. It is not at all clear that annual data is helpful, given the relatively slow pace of significant governance change. Suppose that the greatest frequency at which changes occur is every five years (the interval used in other estimations in the paper). In that case, turning to annual data quintuples the number of observations but it provides no additional information and does not improve the quality of the estimator.

Setting aside more sophisticated econometric issues, there is the more casual inference that occurs when discrete measures such as those of the Polity or Freedom House data sets are used to characterize the state of democratic progress (or lack thereof). By construction the bins in these data sets are sufficiently large that they will be populated with a sufficient number of countries, despite the heterogeneity of their political circumstances. That, in turn, means that they will not be sensitive to the smaller degrees of progress we would expect with a slow-moving phenomenon like democratization. This stasis then invites the criticism that measures that were intended to foster democracy are ineffective.

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<sup>9</sup> This discussion relies upon Maddala (1986, pp. 178-182).

The United States, for example, devotes substantial foreign assistance resources to democracy promotion in the developing world. At the same time, there is public and Congressional pressure on the Executive Branch to demonstrate the effectiveness of foreign assistance programs. But how will this effectiveness be measured in the case of democracy? Frequently the programs work to strengthen “civil society” and non-state organizations. If there is no organized activity outside of the state, it is difficult to imagine democratic change being effected. However, from year to year, the strengthening of civil society is unlikely to have any effect on the measured level of democracy in a country. Without answering the difficult question of how to properly assess the efficacy of these programs, we can note the strength of civil society as one of the explanatory variables that we would like to include as a component in the measure of incipient democracy, d.

### ***Implications***

Given the economic obstacles described in the previous section, it is reasonable to ask whether this is anything more than nihilism. The intent is certainly not to argue that the topic is unworthy of attention; governance is of paramount importance to both economics and political science. Given that importance, misplaced confidence in cross-country regression results is all the more damaging.

This problem is addressed by Achen (2002) in the political science context. He decries both the wanton use of increasingly elaborate estimators without regard for the relevance of the assumptions as well as the tendency to throw a multiplicity of variables in on the right-hand side of regressions and see which turns out to be significant. He writes:

If knowledgeable people are to take the resulting estimators seriously, the distributional assumptions must be defended theoretically and justified with a formal model of the behavior of the political actors. Atheoretical assertions that an estimator follows from *some* arbitrary assumptions, no matter how rigorously, will not persuade. As we have already seen, there are too many possible

estimators for any problem. For an estimator to be believed, it requires microfoundations. Achen (2002, p. 438).

This is the approach advocated in this paper as well, though before turning to new estimation techniques, it is necessary to think more about how democratization can occur. This involves formal modeling of behavior, informed by careful examination of past episodes of liberalization. In terms of the framework above, this means thinking about what components should be included in an incipient democratization function,  $d$ . Such an approach could ultimately highlight new, more informative measures that could lead to better empirical work.

The next section gives an example of how economic integration might feed into an incipient democratization function in a distinct way from trade's previous role in the literature. The focus on microfoundations highlights yet another econometric pitfall for more aggregate approaches.

#### **IV. Economic integration and democratization**

The literature has hardly ignored the potential linkages between economic integration and democratization. There are a number of well-explored avenues through which trade and investment flows could alter political landscapes, though almost all components of these mechanisms are controversial. Trade could drive economic growth. According to the modernization hypothesis, this growth would bring higher incomes, which, in turn, would bring democratization. Alternatively, one could focus on the extent to which trade can alter the returns to different factors of production within the economy. Through Stolper-Samuelson effects, Heckscher-Ohlin based trade could either enhance or diminish the extent of inequality within a country.<sup>10</sup> Depending on the model, this could push the country toward or away from a more liberal political regime.

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<sup>10</sup> Given the convenience of interpreting trade as a force driving inequality, the necessary underlying factors are sometimes passed over. Heckscher-Ohlin based trade relies on differences in countries' relative endowments of factors of production. There are alternatives. Ricardian trade is based on technological differences between countries. Then there is trade based on economies of scale, in which countries with identical technology and factor endowments could still wish to specialize to capture scale gains. Neither of the latter two would have the same implications for inequality. Empirically, it

If we return to the idea of a latent incipient democracy function from the last section, we can think of two distinct components for bringing about democratic change: *means* and *motive*. The trade mechanisms in the literature focus heavily on motive. They describe why trade would augment or diminish pressures for political change. Without attempting to settle disputes on the sign of those effects, this section will focus instead on trade as a vehicle for helping to provide the means for democratic change.

This section argues that there are at least three identifiable paths by which the pressures of commerce are inextricably intertwined with pressures to allow nascent democratic movements: communications technology, development of alternative leaders, and the rule of law. In each of these areas, these facets of modern commerce function as dual-use technology. Rather than the more common usage of that term, in which a supercomputer, for example, might be used for economic or military purposes, here “dual-use” refers to commercial and democratization purposes.

These arguments are illustrated with examples from the People’s Republic of China, the world’s largest autocracy. China has maintained annual GDP growth rates of over 9 percent for over a decade, in no small part because of its engagement in international trade.<sup>11</sup> In 2006, at official exchange rates, exports exceeded 38 percent of GDP.<sup>12</sup>

Meanwhile, China has made no progress, according to the two dominant measures of democratization. In the Freedom House rankings, China is less free in 2007 than it was in 1978.<sup>13</sup> In the Polity IV data set, China has not made any progress away from autocracy since 1976. This would seem, on its face, to suggest that trade has done little to

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is not clear that Heckscher-Ohlin based trade dominates these other forces. See Helpman (1999).

<sup>11</sup> For an overview of China’s integration into the world economy, see Branstetter and Lardy (2006).

<sup>12</sup> Calculations from CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook/print/ch.html>).

<sup>13</sup> In 1978 China received a 6 (second worst) in both political rights and in civil liberties. In 2007, the political rights indicator was at 7 (maintaining a drop in both indicators in the wake of Tiananmen Square in 1989) while the civil liberties indicator had rebounded to a 6 in 1998.



further the democratization of China.<sup>14</sup> The central argument of this paper, in the Chinese context, is that the means for achieving democratic change in China have increased through this external economic engagement.<sup>15</sup> In the notation of the previous section, trade has brought about an increase in  $d$ , without yet crossing the threshold  $d^*$ .

Moving beyond China, the “dual use” approach may also shed light on the persistent observation that trading nations that are heavily dependent on natural resources trade do not seem to flourish in the same way as nations with more broad-based commerce. The final part of this section argues that these “dual-use” facets of commerce are far less essential to concentrated natural-resource based trade.

### *Communications*

In standard Heckscher-Ohlin or Ricardian trade models, it is common to have two goods and constant returns to scale. Given these constant returns, it did not matter whether the wine and cloth were each produced by many atomistic firms or by a very small number of firms (so long as they did not exercise any monopoly power). These are reasonable assumptions to convey the invaluable concept of comparative advantage, but for the purposes of discussing democratization, it is useful to consider how modern trade differs. Grossman and Rossi-Hansberg (2006) describe a world of distributed production and global supply chains. They write:

“Revolutionary progress in communication and information technologies has enabled an historic (and ongoing) break-up of the production process.” (p. 1)

Because they are focused on the changes in the global trading system, they describe a causality that runs from technological change to new opportunities for trade. For countries attempting to participate in the global trading system, there is the corollary that joining global supply chains requires the adoption of modern communications technologies.

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<sup>14</sup> Some scholars have concluded that trade integration provides no substantial prospect for delivering political liberalization in China. See Mann (2007).

<sup>15</sup> For a detailed description of recent progress on democracy in China, see Thornton, 2008.

For countries with Western freedoms, there would be no objection to adopting such technologies. Traditionally, however, one way that autocracies have maintained control is by limiting communication. When newspapers, television, or radio served as the principal means of disseminating information, this would involve restrictions on the freedom of the press. The new technology poses severe challenges to this sort of control. It is possible to impose limits on the types of information entering a country on the internet, but it is not possible to ensure that all communication among millions of people is limited to strictly commercial usage.

The PRC is an autocracy in which the Communist Party controls the press. At the same time, it has sought and achieved dramatic economic growth through engaging in international trade. With low-wage, low-skilled labor, China has been able to play a lucrative role in the production of high technology and other goods precisely because of the unbundling of production described above. This has required a dissemination of communications technology that has directly enhanced the ability of groups opposed to the government to organize.

As an indicator of the extent of change in the PRC's trade, it exported in 7,717 product categories in 1972. By 2001, still on the eve of full WTO participation, this had risen to 16,380 product categories.<sup>16</sup> This broadening of economic activity was accompanied by an explosion in the volume of trade and by an accompanying upsurge in communications technology. In 2006, there were 461.1 million cell phone users in the PRC.<sup>17</sup> By one estimate, internet usage reached 162 million by mid-2007, up from 45 million in mid-2002.

While the PRC government has attempted to limit the information available through the internet, the communications technology has nevertheless allowed exactly the sort of organized protest that can challenge an authoritarian regime. There were officially 74,000 "mass incidents" of public protest in China in 2004.<sup>18</sup> The Washington Post reported in 2005:

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<sup>16</sup> Calculated from Schott (2006, Table 4, p. 20).

<sup>17</sup> CIA World Factbook.

<sup>18</sup> China later stopped reporting the number of mass incidents, which had risen steadily over the years.

“The fallout from a series of demonstrations has been magnified recently because of loosened restrictions on news reporting and increased use of cell phones and the Internet, even by villagers in remote areas, according to government-connected researchers and peasants involved in the protests. Although Communist Party censors try to stifle reporting on the unrest, they said, word of the incidents is transmitted at a speed previously unknown in China.”  
Cody (2005).

In June 2007, 20,000 residents of Xiamen (in Southeast China) launched a major protest against a planned chemical plant and managed to block its construction. According to a Reuter’s report, protesters claimed to have circulated nearly a million mobile phone text messages urging others to join the effort (Lim, 2007).

Whereas these protests in China do not seem to have directly challenged the legitimacy of the Chinese Communist Party, the ability of organized political groups to communicate easily and rapidly and share grievances indicates a distinctly heightened capacity to push for changes in governance.

The tensions between openness and economic advancement have been demonstrated even more recently by China’s oscillating policy toward video web sites. It is substantially more difficult to screen and control the content of videos than websites containing text. On January 30, 2008, China limited video-sharing to state-owned companies. One week later, it rescinded the order, apparently concerned about the economic effects on the Chinese web industry. YouTube was blocked once again in March, 2008 when videos of protests in Tibet appeared. (AP, 2008). Nevertheless, the emergence of images from Tibet in the international media compelled China to address the issue domestically. One reporter concluded that the sequence “showed how difficult traditional censorship has become in an age of cellphones, Internet connections, and satellite TV.” (Cody, 2008)

### ***Alternate Leadership***

A second dimension in which economic integration and commerce build latent capacity for democratization involves the development of leadership candidates outside the authoritarian hierarchy. Whatever the underlying economic or political forces pressing for democratic change, they are far more likely to translate into action if the aggrieved can coalesce around a leader. There is no requirement that such a leader emerge from the ranks of successful business people, but those who have managed to run large organizations and amass ample resources certainly have the potential to serve as leaders.

In China, the number of registered private enterprises grew from 1.76 million in 2000 to 4.30 million in 2005 (China Daily, 2007a). The relationship between these enterprises and the CCP is not always clear. According to one survey, 1 in 3 private entrepreneurs wanted to play a political role (China Daily, 2007b). That need not mean any interest in protest; it could simply be a desire to develop connections (*guanxi*) to achieve further commercial success in a country in which the CCP has immense authority to set the rules that determine business' fate. Yet these are individuals with a background in competitive practices rather than in doctrinal obedience.

It is also a class of individuals with substantial resources. According to another survey, China's 800 richest individuals have an average wealth of \$562 million in 2007 (in a country with per capita income of roughly \$2,000). One third of the richest are reported to be members of the CCP, leaving hundreds who are not (Kwong, 2007).

### ***Rule of Law***

Finally, economic integration creates pressures for enhanced rule of law. This occurs at several levels. Foreign direct investors will seek secure property rights or demand a high risk premium in their absence. To the extent that multinationals establish deeper linkages with the integrating economy, they will require enforceable contracts. The same requirement holds to be a reliable supplier for arms-length trades. Portfolio investors and lenders will require adherence to corporate governance and disclosure laws in addition to enforcement of promises to repay.

Of course, autocratic governments can and have drawn a distinction between rule of law in commercial and political dealings. Yet there is an underlying principle of a government that cannot act in an arbitrary fashion and that subjects itself to some external authority. The deeper the economic integration the greater the push for rule of law may be.

China might seem to be a counterexample to this claim, since neither its legislature nor its court system is independent from the CCP's influence. Pei (2006, p. 7) argues that strict political limits imposed by the CCP have stunted the development of an effective legal system. Yet the evolution of China's legal approach to economic transactions in recent decades shows exactly these pressures. Remarkably, much of China's recent economic boom occurred in the absence of well-defined property rights.<sup>19</sup> This was achieved in part by an informal recognition of property rights and in part by a government commitment to attract foreign direct investment, which served as a self-imposed limitation on the arbitrary exercise of authority.

While it is possible for systems of informal property rights to substitute for more formal systems, there are limits to the substitutability. China's legislature in 2007 overcame years of delay and opposition to grant private property equal protection under law (Levy, 2007). It is not clear what this will mean in practice, since enforcement must still come through a CCP-dominated judicial system, but it certainly marked a symbolic retreat from party orthodoxy.

The pressure for change has continued to mount with controversies over the quality of Chinese exports (Dyer, 2007). The product-quality problems are attributable in part to corruption (an instance of the arbitrary exercise of power). They can also be attributed to the absence of the sorts of enforcement mechanisms observed in open democratic societies. Whereas China is reliant on a finite number of government regulators to ensure that improper additives do not find their way into exported toothpaste, a firm in the West that attempted to transgress would face a more daunting array of opponents. Crusading politicians, muckraking journalists, non-governmental activists, or litigious citizens could

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<sup>19</sup> For a thoughtful review of the rule of law in a commercial context in China, see Dam (2006, Chapter 11). On rule of law in China generally, see Horsley, 2007.

all attack a firm that was found to be engaged in unsavory practices.<sup>20</sup> Not only is this system informationally more efficient, but it starkly limits the opportunities for corruption. Whereas an authoritarian hierarchy allows a transgressing firm to successfully bribe a key individual, the range of potential detractors in a more open society makes such a strategy far more difficult and costly.

As China has moved from the production of products with readily observable quality to those in which customers are reliant upon the integrity of the producer and the system in which it operates, these pressures have grown. The government expressed alarm over the prospect that “Made in China” could be taken to imply substandard quality. The Chinese government has responded, to date, with attempts to enhance the strength of its regulatory regime (Dyer, 2007). Given the dispersed nature of Chinese production and the difficulty that the central government has had in enforcing its decrees throughout the country, it seems unlikely that this will solve the problem.

In sum, economic integration brings pressure for accepting constraints on government power. Once one accepts that governments are fallible, that they can be challenged successfully in court, and that critics will not be threatened with retaliation, this marks a significant advance toward democratization. China has not yet reached that stage, but is being pushed in that direction.

### ***Autocratic governments’ choice***

The importance of the “dual-use” argument is that it imposes limits on an autocratic government’s choice set. Seeking to avoid these pressures for democratization is substantially more costly than efforts to avoid other such pressures.

There are certainly other “single-use” vectors by which pressure can be applied to autocratic governments. Non-governmental organizations and religious groups both form key elements of civil society and can demand democratic progress. For this reason, though, it has not been uncommon for autocratic governments to either suppress these groups or intimidate them into quiescence. There are penalties to harsh acts of suppression, but they tend to be international disapprobation. Unless international public

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<sup>20</sup> The argument for informational efficiency in democracy is closely related to one made by Amartya Sen (1999, p. 181), who describes the essential role of a free press in providing information for famine prevention.

opinion is of great concern to autocratic rulers, this will have a minimal deterrent effect. To attach an economic cost to international condemnation, critical nations have employed economic sanctions, to somewhat mixed effect.<sup>21</sup> Such sanctions will only pinch to the extent that the target country is economically integrated in the first place, bolstering the case for a linkage between economic integration and adoption of international norms such as democratic practices. The effects are also limited by the ability of the international community to act forcefully and in concert, something that happens only rarely.

In contrast, the dual-use effects identified in this section do not depend on other countries' political reactions to an autocracy's behavior. They depend only on the optimizing economic behavior of individuals and firms. An autocracy remains capable of banning communications technology or acting capriciously toward investors, but the effects will be serious and automatic. To the extent that an autocracy's legitimacy depends on delivering economic performance through broad-based economic integration, these pressures will obtain.

### *The Resource Curse revisited*

Not all trade is created equal, however. The choice of China as an illustration was not innocuous. Consider trade based on natural resources. In general, we expect such trade to be far more concentrated. A government can issue concessions to a foreign multinational or entrust extraction to a state-owned enterprise. Without participation in global distributed production across a wide range of sectors, there is no need to allow widespread access to communications technology, no reason for a potential leadership class to emerge, nor any pressures for rule of law. The same volume of trade can be achieved with very different pressures for democratic change.

This suggests that empirical analyses of integration's effect on democracy in which all trade is lumped together are misspecified. The literature on the natural resource curse already identified this problem in its findings that countries reliant upon natural resources for trade have had a different experience with governance than those without natural resource abundance. That is entirely consistent with the argument that authoritarian

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<sup>21</sup> For a history of economic sanctions and analysis of their efficacy, see Hufbauer, Schott, and Elliott (1990).

governments with resource wealth are not under the same pressure to adopt the dual-use technologies described above.

## V. Conclusion

The prevalent practice of using cross-country regressions to estimate the correlates of democracy has come under econometric attack. This paper adds the contention that the forces that drive democracy are continuous, not discrete. The fact that this latent variable cannot be observed directly, only inferred through indicators such as communications ability, does not lessen its importance. Unless one contends that democracy moves in large discrete jumps (and has not moved in China in decades) then standard approaches are biased.

There are all sorts of economic examples in which indivisibilities are ignored. For example, we buy zero cars or one car, not a half. But these are overcome by looking at a sufficiently long time frame or a sufficiently large population that the indivisibilities shrink to unimportance. With the study of democracy, there is a limited sample of countries, expected change is infrequent, and the time span of available quality data is very limited. It is clearly easier to run cross-country regressions than to try to flesh out difficult-to-observe components of a democratic transition model, but to do so is the equivalent of looking for keys only under the lamppost.

China is one country among many, but it looms rather large in the sample of autocracies with population weights. It has pursued a policy of growth through integration with the modern system of globally distributed production. While the resulting prosperity has lent legitimacy to the Chinese Communist Party, it has also unleashed forces that will push toward political pluralism, though those forces are not detected by the prevailing blunt measures of democratic progress. A central argument of this paper has been that the prosperity and those democratizing forces are inseparable.

This is not to argue that China is on an inexorable path to the top of the Freedom House charts. China's leadership could decide that the accompaniments of economic integration are not worth the benefits and try to reverse the process. Even if such a reversal failed, there would be no guarantee that a democracy would emerge.



However, democracy advocates have faced the serious policy question of whether trading with autocracies helps or hinders progress toward democracy. It is in answering this question that the need for more refined measures of progress becomes clearest. Ideally, analytical work would help guide that search for refined measures. A model that described not only the contending forces for change, but the means by which that change might come about could highlight the relevant data. This remains an agenda for future research.

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